



中国船级社  
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: Q01.02-GZ000095

型式认可证书  
CERTIFICATE OF TYPE APPROVAL



证书编号/Certificate No. LD17Q00001\_07

兹证明本证书所述制造厂生产的下列产品能够满足下面列明认可标准的要求。

This is to certify that the following products produced by the manufacturer stated in the certificate can meet the requirements of the approval standards listed below.

认可产品/ Product Approved

船用雷达

MARINE RADAR For High Speed Craft(HSC)

雷达设备CAT 2H

Radar Equipment CAT 2H

制造厂/ Manufacturer

Northrop Grumman Sperry Marine B.V.

118 Burlington Road, New Malden, Surrey KT3 4NR, UK  
118 Burlington Road, New Malden, Surrey KT3 4NR, UK

附加标志/ Notations

无/Nil.

认可标准/ Approval Standard

- 国际海事组织大会决议A.694(17)《作为全球海上遇险和安全系统(遇险和安全系统)组成部分的船载无线电设备和电子助航设备的一般要求》  
IMO Resolution A.694(17) General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids
- 国际海事组织海安会决议MSC.191(79)《船载航行显示器有关航行信息显示的性能标准》  
IMO Resolution MSC.191(79) Performance Standards for the Presentation of Navigation-Related Information on Shipborne Navigational Displays
- 国际海事组织海安会决议MSC.192(79)《经修订的〈关于雷达设备性能标准的建议书〉》  
IMO Resolution MSC.192(79) Adoption of the Revised Performance Standards for Radar Equipment
- 国际海事组织大会决议Res.A.278(VIII)《航海雷达设备控制符号》  
IMO Res.A.278(VIII) Control Symbol of Navigation Radar Equipment
- 国际电讯联盟建议书ITU-R M.1177-4(04/2011)《对于雷达系统无用发射的测量技术》  
ITU-R M.1177-4(04/2011) Techniques for Measurement of Unwanted Emissions of Radar Systems

证书有效期至/ This Certificate is valid until 2020年12月8日 / Dec. 8, 2020

发证机构 中国船级社伦敦办事处  
Issued by CCS London Office

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Date May. 23, 2017



本证书根据中国船级社《钢质海船入级规范》及有关规定签发。关于证书的有关规定见本证书背面的说明。当本证书包括多页纸张时,则所有证书页为一个整体,必须同时使用。每一页证书均须由本社盖章方为有效。证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。本认可证书不代表本社对个体产品质量的检验。有关各方对所持证书的真实性有疑问时,可以向本社检验机构咨询。  
This Certificate is issued pursuant to the Rules for Classification of Sea-going Steel Ships and related procedures of the Society. Refer to the back of the certificate for detailed requirements of the certificate. When the certificate consists of more than one page, all pages of the certificate are taken as a whole and are used simultaneously. No certificate page is valid without bearing the stamp of the Society and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. This approval certificate does not constitute the inspection of the Society about the quality of the unit/batch product. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices.



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CCS Mansion, 9 Dongzhimen Nan Da Jie, Beijing 100007, China 网址/Web Site: http://www.ccs.org.cn  
本地检验机构/CCS Local Office: 中国船级社伦敦办事处 CCS London Office 电话/Tel: 0044-20-77029751 传真/Fax: 0044-20-76809571

LD40479709  
No. 16780453

6.IEC 62388:2013/COR1:2014 Edition 2.0 (2014-02-12) 《导航和无线电设备-船用雷达-性能要求、测试方法和要求的测试结果》

IEC 62388:2013/COR1:2014 Edition 2.0 (2014-02-12) Maritime navigation and radiocommunication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results

7.IEC 60945:2002/COR1:2008 《船用航行和无线电通信设备及系统-通用要求-试验方法和试验结果的要求》

IEC 60945:2002/COR1:2008 Maritime Navigation and Radiocommunication Equipment and Systems - General Requirements - Methods of Testing and Required Test Results

### 产品明细/ Product Description

雷达设备CAT 2H/Radar Equipment CAT 2H 型号/Type	: VisionMaster FT,CAT2H 25 or ECAT2H 25, Radar Systems
系统组成/System components	: See Others
额定电压/Rated voltage	: 100-240V AC, 50/60Hz
峰值功率/Peak of output power	: X-Band:10kW or 25kW; S-Band:30kW
天线长度/Length of antenna	: X-Band:4ft, 6ft or 8ft; S-Band:12ft
软件版本号/Software revision	: 9.0
工作频率/Frequency	: X-Band:9.410GHz; S-Band:3.050GHz
最小操作显示区直径/Minimum operation display area diameter	: 273mm
最小显示区域/Minimum display area	: 376x301mm
是否具有自动捕获目标功能/Whether includes auto acquisition of targets function	: Yes
最少被捕获的雷达目标数/Minimum acquired radar targets capacity	: 60 (CAT2H) Or 100 (ECAT2H)
最少被激活的AIS目标数/Minimum acquired AIS targets capacity	: 40
最少休眠AIS目标数/Minimum sleeping AIS targets capacity	: 200
是否具有试操船功能/Whether includes trial manoeuvre function	: Yes
罗经安全距离/Compass safe distance	: Display: Standard:2.4m;Steering:1.8m X-Band: Standard:3.3m;Steering:2.0m S-Band: Standard:4.3m;steering:2.6m
性能监测器型号/Performance Monitor type	: Integral
是否集成电子标绘 (EPA) 功能/Whether Electric Plotting Aid function be integrated into the radar equipment	: No
是否集成自动目标跟踪 (ATA) 功能/Whether Automatic Tracking Aid function be integrated into the radar equipment	: Yes
是否集成自动雷达标绘 (ARPA) 功能/Whether Automatic Radar Plotting Aid function be integrated into the radar equipment	: Yes

### 批准的图纸和设计计算书/ Approved Drawings and Design Calculations

图纸批准号/Drawings Approval No. : NP17A00397

### 产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No.	: QinetiQ/MS/EES/TSTR0801808/1
试验报告日期/Test Report Date	: 2008-08-29
试验单位/ Laboratory	: QinetiQ
试验单位地址/ Test Address	: Cody Technology Park Ively Road, Farnborough Hampshire, GU14 0LX
试验报告编号/Test Report No.	: QinetiQ/SPSD/EMC/2005/081
试验报告日期/Test Report Date	: 2006-12-06
试验单位/ Laboratory	: QinetiQ
试验单位地址/ Test Address	: Cody Technology Park Ively Road, Farnborough Hampshire, GU14 0LX
试验报告编号/Test Report No.	: QinetiQ/EMEA/iX/CR070194/Issue 1.0

试验报告日期/Test Report Date	:	2007-12-20
试验单位/ Laboratory	:	QinetiQ
试验单位地址/ Test Address	:	Cody Technology Park Ively Road, Farnborough Hampshire, GU14 0LX
试验报告编号/Test Report No.	:	QinetiQ/MS/EES/TSTR0801152/1.1
试验报告日期/Test Report Date	:	2008-07-08
试验单位/ Laboratory	:	QinetiQ
试验单位地址/ Test Address	:	Cody Technology Park Ively Road, Farnborough Hampshire, GU14 0LX
试验报告编号/Test Report No.	:	QinetiQ/EMEA/iX/CRO802757/Issue 1.1
试验报告日期/Test Report Date	:	2008-02-19
试验单位/ Laboratory	:	QinetiQ
试验单位地址/ Test Address	:	Cody Technology Park Ively Road, Farnborough Hampshire, GU14 0LX
试验报告编号/Test Report No.	:	QinetiQ/MS/EES/TSTR0801840/1
试验报告日期/Test Report Date	:	2008-09-03
试验单位/ Laboratory	:	QinetiQ
试验单位地址/ Test Address	:	Cody Technology Park Ively Road, Farnborough Hampshire, GU14 0LX

### 产品适用范围/ Application of the Product

船舶与海上设施 / Ships and Offshore Installations

### 认可保持条件/ Maintenance Requirements of Approval

1. 型式认可后, 如果产品及其重要零部件的设计、所用材料或制造方法有所改变, 且影响到产品的主要特性、特征; 或产品的性能指标有所更改, 且超过认可的范围, 则有关图纸和文件应经检验机构审批。并在检验机构认为必要时, 经本社检验人员见证有关试验和进行检查, 其结果应能证实仍符合认可条件。

After type approval, if there are changes to the design, materials used or manufacturing method of the product and important components and such changes affect major characteristics and properties of the product, or property indexes of the product are changed and exceed the scope of approval, related drawings and documents are to be examined and approved by the concerned survey office. Where deemed necessary by the survey office, the surveyor to the Society will go to witness relevant tests and conduct inspection and the results should be able to demonstrate compliance with the approval conditions.

2. 工厂的质量管理体系应保持有效运行, 并且与认可时一致。如果质量管理体系发生改变, 应经原体系认证机构审核并报本社批准。

The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.

3. 认可证书有效期内, 如果出现可能导致本社取消认可的情况, 工厂应及时采取有效的纠正措施。

Within the validity of the approval certificate, if cases occur that may cause the Society to withdraw the approval, the manufacturer should take corrective actions in a prompt and effective manner.

4. 在认可证书有效期内, 本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核, 以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.

5. 型式认可A证书获得者应接受本社每年一次的定期审核, 定期审核日为认可证书期满之日对应的每一周年日, 检查工作可在周年日的前后三个月内进行。

Those who have obtained the certificate of type approval A should be subject to periodical audit every year. The periodical audit should be carried out within 3 months before and after the anniversary date which corresponds to the date of expiry of the relevant.

### 认可后的产品检验方式/ Method of Product Inspection after Approval

认可后的产品检验由制造厂按本社批准的产品检验计划进行, 本社在文件审核合格后颁发船用产品证书。

After approval, product inspection should be carried out by the Manufacturer in accordance with the product inspection scheme approved by the Society, and the Marine Product Certificate is issued by the Society upon satisfactory documents review.

### 对于原材料和零部件的检验要求/ Inspection Requirements for Materials and Components

产品如下原材料和零部件应由本社认可的制造厂生产/The following materials and components of the product should be manufactured by the factory approved by the Society:

无/Nil

产品如下原材料和零部件应经本社检验/The following materials and components of the product should be inspected by the Society:  
无/Nil

产品如下原材料和零部件的制造厂清单, 经本社批准方可变更/The list of manufacturer for the following materials and components of the product should not be changed without the Society's approval:  
无/Nil

**责任声明/Statement of Responsibility**

本社的认可不影响、替代与本社授权或检验无关的各方对上述工厂的认可和发证, 并且不对与本社授权或检验无关的各方负责, 不承担其未经应允而承认、接受本社认可所导致的法律和经济责任。

The approval of the Society does not affect and replace any approval and certification of the manufacturer by any parties that bear no relation with this Society's authorization or survey and

therefore takes no responsibility for these parties. The Society does not undertake any legal and

economic liabilities arising from accepting this Society's certificate without prior permission from

this Society.

**其他/Others**

本社已审核了产品厂无石棉声明, 但本社的审核不免除产品厂按照合同关系向订货方保证产品无石棉的责任。  
The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society. However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser under contract will not be exempted.

本证书由原证书 (LD13T00007\_07) 换发。  
The Certificate renewed according to LD13T00007\_07.

Other Description:

Bearing Discrimination:  
Better than 1.3° with 8ft X Band antenna;  
Better than 2.4° with 12ft S Band antenna

Hardware:  
Radar LCD Monitor;  
Processor-Radar;  
VMFT PCIO Interface Unit;  
Control Panel;  
19 inch Integrated Tabletop Display;  
Security Device:  
X-Band:  
Transceiver/Turning Unit(10kW or 25kW)  
or Transceiver Bulkhead(10kW or 25kW)  
and Turning Unit;  
X-Band Antenna(4,6 or 8ft)  
S-Band:  
Transceiver/Turning Unit(30kW)  
or Bulkhead Transceiver(30kW)  
and Turning Unit;  
Scanner Control Unit;  
S-Band Antenna 12ft;  
Interswitch

中国船级社伦敦办事处

CCS London Office

\*\*\*\*\*本证书正文完/ End of Text\*\*\*\*\*